RELEASE NOTE

AT Version X.51a

Revision: **001**
Date: **December 2005**

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AT Version X.51a
Release Note

651a09gg.v13
351a09gm.v13

Reference : **WM_DEV_OAT_DVD_009**

Version : **001**

Date : **December 09th 2005**

Level	Date	History of the evolution	
001	December 09th 2005	Creation	

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1 Introduction

1.1 Scope of this document

The scope of this document is the X.51a AT software release description for WISMO Quik series Q2400A, Q2406x, Q2426B and Q2501B.

1.2 Audience for this document

This Release note may be distributed to all direct and indirect customers and will be posted on the corporate web site under the Support\Private area.

1.3 Release Feature List

1.3.1 Main Features Reminder

Features list for AT	SW version	
	351a	651a
Multiple UART management	X	(*)
Extended SMS Storage: up to 99 in Flash	X	X
Extended Phone Book Management (Name, 5 numbers, address, e-mail, group)	X	X
Low Power consumption for the module with disconnected mode (Radio and protocol stack off: but Open AT® Application running)	X	X
Interruption PIN Management	X	X
GPS Management (Q2501B only)		X
Agenda management	X	X
Extended characters	X	X
SIM Speed Enhancement default activation	X	X

(*): Refer to chapter 6.5.3.

1.3.2 New Features / Evolutions

None.

1.4 Dedicated versions for Specific Markets

1.4.1 New product introduction

As per specific market requirements, additional "countries dedicated" version of module has been launched.

1.4.2 Dedicated version

As these products are tailored for the dedicated countries, they are locked not to work on any other network but the selected country's available carriers. These products will not be compatible with the former SW versions on the branch (refer to 0). Obviously Wavecom will perform maintenance on these product in the same way as it is done on other products.

1.4.3 Storage & Marking

For countries dedicated versions, in the Product Code file, the SW Configuration of this version includes the mention "CCx", x depending on the country.
This SW configuration will only appear on the pizza box. A special attention is required to manage the storage, as this SW configuration is the only way to distinguish the product.

1.4.4 Availability

SW versions available on the Wavecom web site are only for not dedicated products.
In order to obtain Software version for updating the products dedicated to specific countries, contact your Wavecom technical support.

1.4.5 Warning

Standard X.51a software not tuned for dedicated countries must not be used on modules that are dedicated to a specific country, as it is not compatible. In this case, the message BAD SOFTWARE is displayed (refer to the AT Command Interface Guide for more information on this message).
This can be undone by re-downloading a compatible version.

1.4.6 Software Behavior

Specific country lock feature aims at locking a module use to a pre-determined list of countries.
⇨The use of module for not allowed countries is forbidden. In this case, the message "**SIM NOT ALLOWED FOR THIS MODULE**" is sent, the module resets and AT SIM commands are then no more available.
⇨ The module upgrade by using a specific country lock version is not reversible. Effectively, all modules upgraded by using such a version won't be allowed to use previous software version. In this case, a message "**BAD SOFTWARE**" will be displayed.

2 RELATED DOCUMENTS

[1]	AT Commands Interface Guide for revision X51a	WM_ASW_OAT_UGD_00016-006

[2]	Hands free audio application note	WM_ASW_OAT_APN_014-001

3 ABBREVIATIONS AND DEFINITIONS

IFS : Interface Specification
LLC : Low Layer Compatibility
STK : SIM Toolkit
UGD : User Guide
WM : Wavecom
DF : Design Feature

4 Hardware Compatibility

4.1 Module Compatibility

X51a Software version	Module Compatibility List
6.51a	Q2406A Q2406B Q2426B Q2501B
3.51a	Q2400A

5 Software release description

5.1 Release identification

	WISMO Quik – Q24X6X, Q2400A and Q2501B - Series		
Date of generation	November 30, 2005		
Software identification	651a09gg.Q2406A	16/2 Mbits	GPRS+Open AT®
	651a09gg.Q2406B	32/4 Mbits	GPRS+Open AT®
	651a09gg.Q2426B	32/4 Mbits	GPRS+Open AT®
	651a09gg.Q2501B	32/4 Mbits	GPRS+Open AT® + GPS
	351a09gm.Q2400A	16/2 Mbits	GSM only + Open AT®
IMEISV	19		
Checksum	6.51a	0x9F D8 68 96	
	3.51a	0x9F D8 6B 92	
Flash type	16/2 Mbits (type A)		
	32/4 Mbits (type B)		
Open AT® version	V3.03		
Xmodem downloader	V2.14		
Previous Official Release on the Branch	6.51 (6.51a)		
	3.51 (3.51a)		

5.2 Released Files & Download Processes

This section describes the files that need to be downloaded on the module with DwlWin tool or with a HyperTerminal software.

5.2.1 X-Modem download mode

5.2.1.1 X-Modem configuration required for download

In order to download the FW by using the X-Modem protocol, the following configurations and conditions have to be set:
- Create an Hyper Terminal connection on COM port with following parameters:
    - *Bit/Second*   **115200**
    - *Data Bit*   **8**
    - *Parity*   **None**
    - *Bit Stop*   **1**
    - *Flow Control*   **Hardware**
- A version of AT software must be already downloaded on the module

5.2.1.2 Common Files required for download

The file to download depends on the HW platform. This file has the following name:
- **X51a_full_<Module_Type>.dwl**

The content of this file is the following:
- X.51a binary version,
- Common E2P configuration (w.dwl file),
- E2P configuration specific to <Module_Type> module.

Ex: 651a_q2406b.dwl is the file to download on a module Q2406B.

5.2.1.3 Download procedure

The following procedure has to be performed in order to download the FW in the module:
- Connect the Starter Kit on this COM port and start the module.
- Enter "at<CR>" on the Hyper Terminal windows. Module has to answer:
        "*OK*"
- Check the current downloader (dwl) on the module side. It must be the same or compatible to the embedded one in the new binary (see the Xmodem downloader version in the table paragraph 5.1).

    NB: *To recall the current dwl version, enter "at+wdwl?<CR>" on the Hyper terminal. The module answers:*
            "+WDWL: V<downloader version>"
    If existing downloader is not the good one, the new downloader has to be reloaded first. In order to download it, use the following process and select "dwl.dwl" as file to download. When download is completed and the module has been reset, repeat the following procedure to download the new AT binary.

- Enter "at+wdwl<CR>" to start the download. Module has to answer:
        "*+WDWL: 0*
    ▐▐▐▐▐▐▐▐▐▐▐....."
- Enter menu "Transfer/Send a file"
- Select protocol: *"1k Xmodem"*

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- Select the *dwl* file to download.
- Validate so that the download starts.
- When new characters "❙" are received, the download is finished.
- Reset the module by using the command "*AT+CFUN=1*" and wait for the "*Ok*" answer.

5.2.1.4 Specific GPS Files (only for Q2501B series)

Not applicable.

5.2.2 DwlWin download mode

5.2.2.1 DWLWin configuration required for download

Before launching the download process, the DWLWin tool has to be configured as following:
- Select CPU type field according to the module series:
    - **WISMO 2-3**   For Q24 series module
    - **Q2501**   For Q2501 modules
- Select "Erase objects" and "Erase Customization Files" options

5.2.2.2 Common Files required for download

The E2P parameters to download depend on the HW platform. For this reason, two files must be downloaded for E2P parameters:

- **pro-dwl.wpb**   (Binary)
- **w.e2p**   (Generic E2P file)
- *<Module><FlashType>***.e2p**   (module specific E2P file)
  For example: 'q2406b.e2p' for Q2406 module with flash type B (32/4)

<u>Warning</u>: All these files must be downloaded at the same time.

<u>Note</u>: the custo_AT.CUS file provided with previous X50a firmware is no more provided since X51 firmware. The content of this file is now directly included in the binary file.

5.2.2.3 Download procedure

Refer to DWLWin Help provided in the DWLWin tool.

5.2.2.4 Specific GPS Files (only for Q2501B series)

The GPS following file must be downloaded for the Q2501B module version:
- **<CodeSoft>_300-gps.wpb**   (GPS binary file)

5.3 Software Tools Version

This section gives the last Wavecom tools versions.

S/W Tools Name	Version
DwlWin Downloader	v3.3.9.1
Target Monitoring Tool (TMT)	V2.7.5.0
TMT Workspace	B51i09gx.v13_64k.wks

6 Software Description

The following table shows the feature availability depending on the SW version.

	3.51a	6.51a
GPRS Class 10	No	Yes
Open AT®	Yes	Yes
TCP/IP	No	Yes
GPS	No	Yes on Q2501B

The *Severity* values have the following meaning :
- 1 : Critical
- 2 : Major
- 3 : Minor
- 4 : Cosmetic

6.1 Validated Corrections/Improvement

This section gives the list of all corrections or improvements integrated in the X.51a version from the X.51 version.

Id	Description (What / When)	Impacted Domain	Impacted Sub Domain	Severity*
28002	During the TC 27.22.4.15 GCF test, the module resets after a Provide local information (MNR) proactive command	AT	STK	1
28877	TC 46.1.2.2.4.3 failed : GCF 3.18.0 [Cat. A] : Reset of the MS at step 11.	GPRS	OTHER	1
28910	TC 46.1.2.2.4.3 failed : GCF 3.18.0 [Cat. A] : Reset of the MS at step 11.	GPRS	OTHER	1
29068	The module resets when a call is made with SIM cards having incorrect LND entries	AT	PHONEBOOK	1
29217	When the E2P mirror is restored, some settings are not updated. This results in incorrect settings.	AT	OTHER	1
29241	When activating modem powerless mode with command AT+WBHV=1,1, modem turns also into "response mode on a call : display of OK just after +WIND : 5,x indication". This results in the reception of 2 consecutive OK.	AT	OTHER	1
29242	Activation of Low consumption through command at+wbhv=1,2 causes OK then an ERROR code although the activation is taken into account.	AT	OTHER	1
29261	When an Open AT application is running, if the external application uses the AT+CCED=0,1 command, the module resets.	AT	OTHER	1
29378	On Q2501B module, when setting GPIO3 as an input, it is not available for reading purpose.	DEVICE	ADC/BAT	1
29452	Reset when EF_CBMI present in SIM card and AT+CSCB=1 sent	AT	SMS	1
29811	Reset may occur on specific networks after a location update if a handover occured during this procedure and SI5 was not received on the target cell before location update completion.	GSM	RR	1
29824	If a SIM card has more than 20 "Replace type" SMS, the module	AT	SMS	1

	resets systematically during a SMS reading (+CMGR command).			
29871	TC 21.3.2 failed : GCF 3.18.0 [Cat. B] : OPEN_LOOP_CMD with Ack not sent at the end of the test.	GSM	OTHER	1
29945	When battery charging is used (command AT+WBCM), ADC values are not updated any more with the command AT+ADC?.	DEVICE	N/A	1
30155	Battery charging could cause a damage on the battery, when charger stays plugged for a while after the end of charge.	DEVICE	ADC/BAT	1
30209	Default value for the number of dictionary entries is set to 2048 (command AT+DS). This value may cause outgoing DATA calls to fail. The default value should be set to 1024.	SYS	OTHER	1
30893	With a running Open AT application, if the external application uses the AT+CMGS command to write an SMS, if the 0X0D character is used, then all the AT commands reply +CME ERROR: 515	AT	SMS	1
28769	When a call is setup with a number having 'P' or 'p' modifier at the beginning (e.g. ATDPxxx), call fails with a CEER error cause 96. This does not allow to setup a call if 'P' or 'p' modifier is used.	AT	OTHER	2
28977	When an Open AT application is running, there is no way to enable the Wavecom Multiplexing protocol on the serial link (AT+WMUX=1 command has no effect).	AT	OTHER	2
29515	The module undergoes GPS cold reset when GPS hot reset is requested	AT	OTHER	2
29828	When concatenated commands AT+CPIN?;+CPINC? are given, the module gives +CME ERROR: 536 for +CPINC? and +CME ERROR: 515 for subsequent AT commands. Reboot is the only way to recover normal behavior.	AT	OTHER	2
30125	Class 1 SMS are always stored in ME even if the preferred storage area is set to SIM.	AT	SMS	2
30162	When AT+WBHV=1,1 is set, the module cannot be switched off using AT+CPOF command.	AT	OTHER	2
30236	During GCF test 27.22.5.2 §2.3, the SMS CB is not returned by the module. It should return a +CBM or +CBMI indication	AT	STK	2
30237	During GCF test 27.22.5.2 §2.3, the SMS CB is not returned by the module. It should return a +CBM or +CBMI indication	AT	STK	2
30338	GPO2 value switches from 0 to 1 when downloading via Xmodem	N/A	N/A	2
30485	On Q2501B, either ANTENNA_VOLT value or ADC_AUX value is wrong.	DEVICE	ADC/BAT	2
30565	PLMN list not updated with NAPRD10 2.6.8 and SE 22/08/2005	AT	N/A	2
30845	AT+WGPSCONF=2 returns incorrect GPS temperature value.	DEVICE	ADC/BAT	2
28984	With a running Open AT application, if serial link configuration commands are concatenated with the AT&W one (E.g. AT+IFC=0,0;&W), the new configuration will not be stored in E2P memory.	AT	OTHER	3
28611 28778 28902 29572 29773 29853 29940 30175 30502 30593 30651 30750	User Guide updated	DOC	N/A	3

6.2 Integrated But Not Validated Corrections/Improvement

None.

6.3 Specificities Versus Previous Official Release on the branch

Description
V42bis compression – The number of dictionary entries is set to 1024 by default, instead of 2048 in previous OS (see also restriction applicable to A memories only).

6.4 Certification Compliance

All the platforms are compliant to R&TTE EN 301 419-1 v4.1.1 and EN 301 511 v7.0.1.
The following table sums up the certifications passed for this software version or the last version that obtained a certificate.

	GCF-CC / WM SW	PTCRB / WM SW
Q2400A	v3.18.0 / X51	-
Q2406x	v3.18.0 / X51	-
Q2426B	-	V3.2.1 / X51
Q2501B	v3.18.0 / X51	-

6.5 Additional Information / Restrictions

This section lists additional information or restrictions that must be taken into account regarding the X.51a firmware.

6.5.1 Common to all modules

Id	Description
DF	**TCP/IP Everywhere** – The TCP/IP application is not activated by default. The AT+WOPEN=1 command has to be sent for TCP/IP stack activation.
27784	**LD phonebook** – When the module is reset, some of the Last Dialed Numbers might have been removed from the LD phonebook.
28870	**Charge indications** – Charge indications are not received on Q2501B.
29282	**Downloader** – It is no more possible to monitor the DCD signal (which is multiplexed with a GPIO) to launch automatic download. Indeed, the latest downloader to be used with X.51a version does not initialize GPIOs anymore.
31086	**Battery charging -** If BattLevelMax parameter is set to a higher value than 4490 with the command AT+WBCM, when the module restarts, the ADC values are no more available. The limit of BattLevelMax should be 5000.

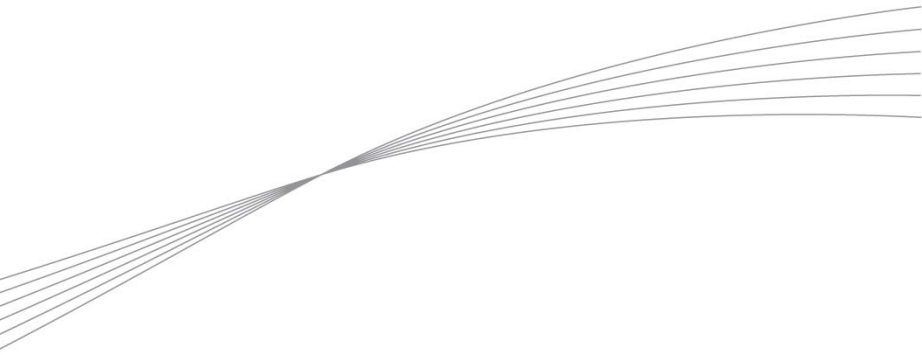| 31147	**SMS Status Report -** When the SIM doesn't contain the EF-SMSR and Status Report is configured to be stored in flash (+CNMI and +CSMP commands), the Status Report received after sending a SMS (+CDSI indication) is not stored in flash and +CMGR command to read it blocks the module in +CME ERROR: 515 state.
31223	**Certification –** MANDATORY Test 27.22.4.7.1 seq 1.3 failed.
31372	**Calling Line Identity Presentation -** When an incoming call is made from a number which has been saved in the phonebook of the called party (ADN or ME), if the CLIP is activated on the called module and if the character set selected with the command AT+WPCS is "HEX" or "CUSTOM", a "@" character is added at the end of the name field.
31385	**UART2 -** Flow control does not work on UART2.
31395	**Automatic dialing -** AT%D1 command cannot be performed from FD (Fixed Dialing) directory.
31678	**External application / Open AT application interaction -** Reset ("Error #0011 : Release memory error…") may occur when at the same time an Open AT application treats received SMS and an external application sends AT commands to the module.

6.5.2 Specific to A memories

Id	Description
28778 28757	**DATA CSD / GPRS –** Data CSD calls and GPRS sessions are not simultaneously available.
28844	**Agenda –** A reset can occur during GPRS attachment when agenda events are stored. Consequently, agenda must not be used if the GPRS is used.
31274	**TCP/IP Plug-in –** On A memory module, reset may occur when using simultaneously or consecutively 2 TCP sockets, after having performed voice calls.
31672	**V42bis compression –** The number of dictionary entries is set to 1024 by default. This is also the maximum value that must be used with A memory modules. If an upper value is used and V42bis compression is enabled, the module may reset systematically when performing an outgoing DATA call.

6.5.3 Specific to Q2501B module

Id	Description
DF	**UART2 availability –** The UART2 is not available when the GPS internal mode is activated on Q2501B (see AT+WMFM chapter in the AT Command Interface Guide).
31391	**GPS –** GPS UART speed cannot be changed using AT+WGPSCONF=1,<baudrate> command. This results in incorrect speed setting.

6.5.4 Specific to M1306B modem

Id	Description
31058	**GPIOs commands must not be used** – M1306B modem does not respond after AT+WIOM=1023,1023 command. The only way to restore the modem is to re-download the X.51a software using DwlWin tool.

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